

INSTRUCTIONS FOR 600XL MODIFICATION TO 64K

____ STEP 1: Make sure your 600XL is turned off and the A/C adapter is removed. Turn your 600XL over and remove the four screws that hold the top housing. Turn the unit over right side up and remove the top housing. Pull gently on the flat cable that connects the keyboard and top housing to the circuit board. Remove the ground wire that connects the top housing to the circuit board and put the top housing out of the way. Remove the screws that hold the board and shield to the lower housing. On the upper left side of the shield, there is a 3/8" hole. Insert a magnetized phillips screwdriver in the hole and remove the last screw holding on the board. Grasp the board on the bottom left side and pull it toward you while holding the bottom housing with your other hand. The board should come out with a little pressure. Remove the screw and nut on the right side of the shield and bend all the tabs upright so the top shield can be removed. Arrange all screws so that they can be put back in the same holes they were taken out of. It is not necessary that the lower shield be removed. This is the hardest part.

____ STEP 2: Locate and remove the integrated circuit chip U18. It is a 74S32 and is located to the right of the RF modulator (refer to the illustration). Use a small screwdriver or nail file and gently pry each end until the chip can be pulled out by hand. Be careful not to bend any pins. Bend out pins 8,9 and 10 so they are at a right angle to the other pins. Refer to the diagram for proper pin numbers. IC chips are numbered counter-clockwise from the dot or 1 position. Insert the red jumper wire between pins 8 and 10 of the chip socket. Reinsert the chip in the socket.

____ STEP 3: Locate and remove U5. It is the upper 74LS158 chip. Bend out pin 3. Cut off about 1/16" of this pin so it will not touch any of the pins on the adjacent chip. Reinsert this chip in its socket.

____ STEP 4: Locate and remove U6(74LS158). It is below U5. Bend out pin 10. Again cut off about 1/16" of this pin so it will not touch any of the pins of the adjacent chip. Reinsert this chip in its socket.

____ STEP 5: Solder one end of one of the enclosed 4" blue wires to pin 3 of U5. Solder one end of the other enclosed wire to pin 10 of U6.

____ STEP 6: Refer to the illustration and locate the two solder pads to the left of U15. U15 is a 74LS375. Solder the wire from pin 3 of U5 to the lower pad. Solder the wire from pin 10 of U6 to the upper pad. This is easily accomplished by heating up the pad with a solder iron and pushing the wire through the hole. Make sure you have a good solder joint by pulling firmly on the wire to make sure it does not come through.

____ STEP 7: Locate and remove U11 and U12. They are not going to be reused . Replace them with the enclosed chips making sure that they are oriented so that pin one is on the lower left of the chip and that the notch is facing left. This concludes the modification.

SYSTEM CHECKOUT

_____ STEP 8: Recheck all of your work to make sure no mistake was made and no short exists that shouldn't be there (ie. solder blob). With the top shield off, plug in the TV cable and the A/C adapter. Power up the unit and make sure that "READY" appears in the upper left hand corner of the screen. It is normal to see a lot of interference with the shield off. If you do not get the ready prompt, immediately power down the unit and recheck your work and verify no mistake was made. A blank, colored, or self test screen indicates that something was connected wrong.

_____ STEP 9: If "READY" does appear, turn the unit off, insert the keyboard cable and power up again. Type: PRINT FRE(0). Behold, you now have 37902 free bytes to play with. You can also run the self test. Power up the unit with the OPTION key depressed. After about 5 minutes of testing, you should see 48 green squares indicating you have installed everything correctly.

_____ STEP 10: Power down, unplug the unit and reinstall the upper shield in reverse order of removal. Be especially carefull not to short any components with the shield. Also, there is a tab right above the RF modulator, make sure this tab makes contact with the metal case on the modulator. Install the board in the lower housing making sure all ports fit through their respective holes. Reinstall all screws in the shield and lower housing including the one you took off the left side through the hole in the shield. Reinstall the top housing and keyboard. If it has a ground wire, make sure you connect it. Reinstall the remaining four screws that hold the top and bottom housings.

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BLUE WIRES 4" LONG
2 RAM CHIPS
1 DIP JUMPER
1 600XL ILLUSTRATION

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